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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,927

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Masaki Hirohashi

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EXAMINER

ROY, SIKHA

ART UNIT

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2879

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/585,927	<b>Applicant(s)</b> HIROHASHI ET AL.	
	<b>Examiner</b> Sikha Roy	<b>Art Unit</b> 2879	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-15 is/are rejected.
- 7) ☒ Claim(s) 4, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The Response, filed on March 15, 2009 has been entered and acknowledged by the Examiner.

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claims 1 and 4-17 are pending in the instant application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub 20050253520 to Tanabe et al., and further in view of EP 0948030 to Shimokawa et al.

Regarding claim 1 Tanabe discloses (Figs. 1B, 4A, 4B [0029] – [0033], [0044] - [0048]) a discharge lamp comprising an airtight container (arc tube) 1 filled with discharge medium mainly noble gas, a first electrode 2 provided in the air tight container, a second electrode 4 that includes an opening through which light emitted from the airtight container is emitted, formed inside an insulator holder 21 (dielectric member) and thus provided to have predetermined interval to the airtight container, the insulator holder 21 externally attached to the airtight container and includes a

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penetration hole to which the airtight container is inserted, the second electrode 4 is fitted with the insulating holder.

Tanabe is silent about the second electrode including a reflective surface.

Shimokawa in same field of endeavor discloses ([0032], [0069]) a discharge lamp comprising a discharge vessel including an internal electrode and a second external electrode, formed of reflective aluminum thus increasing the amount of light emitted from the aperture and in a specific direction.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the second electrode of Tanabe include reflective surface as suggested by Shimokawa for increasing the amount of light emitted and in a specific direction.

Regarding claim 5 Tanabe discloses ([0033], Fig.6) the one insulating holder (dielectric member) is made of polyester resin having the same length as that of the airtight container. Tanabe does not expressly disclose the holder being transparent. Shimokawa discloses the insulating holder made of transparent material [0045]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use transparent insulating holder for holding the airtight container of Tanabe since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Regarding claim 6 Tanabe discloses (Fig. 4B) the second electrode 4 is buried inside the insulating holder 21(dielectric member 6) to have a predetermined interval to the airtight container.

Regarding claim 7, Tanabe as modified by Shimokawa discloses all the limitations same as of claim 1. Tanabe discloses (Fig. 4B) the external electrode buried inside the insulating holder. Shimokawa discloses ([0032]) a reflecting member including an opening through which light is emitted and provided with the second electrode for increasing the amount of light emitted from the lamp. Regarding 'the reflection member externally provided to the second electrode' the examiner notes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the reflective film outside of the buried second electrode (from inside as disclosed by Shimokawa) since it has been held that rearranging parts of an invention involves only routine skill.

Regarding claim 10 and 11 Tanabe discloses (Figs. 4A, 4B, 6) the holder includes an empty section that is provided at a side at which light is emitted from the airtight container 1 and that has a width smaller than the outer diameter of the container.

Regarding claims 12 and 13, Tanabe discloses the claimed invention except for the limitation of predetermined interval between the second electrode 4 and the container 1 in a range from 0.1 mm to 2.0 mm at the shortest. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the interval in the range of 0.1 mm to 2.0 mm so that the

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lamp provides adequate luminescence with a low operational voltage, thus reducing operational noise, since optimization of workable ranges is considered within the skill of the art.

Regarding claims 14 and 15 Tanabe discloses ([0019]) the discharge medium includes xenon gas and a fluorescent medium is layered on the inner circumference of the airtight container.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub 2005/0253520 to Tanabe et al., EP 0948030 to Shimokawa et al. and further in view of USPN 6,796,678 to Moon.

Regarding claims 8 and 9 Tanabe discloses one holder with opening and corners at a side at which light is emitted from the airtight container is joined and is silent about the plurality of holders arranged to be parallel to one another and corners at a side at which light is emitted from the airtight container are joined.

Moon in same field of endeavor discloses (Figs. 5C, 13) a plurality of holders 42c arranged parallel to each other and parallel airtight containers passing through them and plurality of holders are arranged at corners at a side at which light is emitted from the airtight container are joined. Moon teaches this provides simplified assembling of the light emitting device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the holder of one airtight container of Tanabe to plurality of holders arranged parallel to each other and corners at a side at which light is emitted

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from the airtight container are joined as suggested by Moon for providing a simplified assembly of the light emitting device.

### ***Allowable Subject Matter***

Claims 4, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 4 the prior art of record does not teach or suggest the combination of limitations as claimed and specifically the length  $a$  of the insulating holder in a direction along which the airtight container is inserted is determined such that a relation between length  $a_1$  at a side from which the airtight container emits light and length  $a_2$  at a side at which the second electrode is provided is  $a_1 < a_2$ .

Regarding claim 16 the prior art of record does not teach or suggest the combination of limitations as claimed and specifically the at least one insulating holder includes a protrusion at a position where the second electrode is provided.

Claim 17 would be allowable because of its dependency status from claim 16.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

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***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sikha Roy/

Primary Examiner, Art Unit 2879